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PATENT ABSTRACTS OF JAPAN

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**(54) MANUFACTURE OF SEMICONDUCTOR
DEVICE**

(57) Abstract:

PURPOSE: To avoid the electrostatic breakdown of an element during the ion implantation step by a method wherein the intensity distribution of ion beams is adjusted based on the density distribution of the defects developed by the ion beam irradiation on the surface of a semiconductor substrate for inspection.

CONSTITUTION: During the ion-implantation step in a semiconductor substrate, a semiconductor substrate for inspection is irradiated either with the scanning stopped ion beams or the one directionally scanned

ion beams. The density distribution of the defects developed by this irradiation step is measured by a microwave defect detector. Next, the intensity distribution of the ion beams is adjusted so that the density distribution of the defects may be equalized by the beams by previously prepared graphs, figures, etc., comparing the defect density with beam density. Through these procedures, the density distribution of ion beams can be observed in a short time thereby enabling the ion beams to be adjusted evenly. Accordingly, the electrostatic breakdown of an element during the ion implantation step is avoided for enhancing the performances of the semiconductor device.

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